AMENDMENTS TO THE CLAIMS

Claims 1-15 (Canceled)

16. (Currently Amended) The system of claim ~~15~~ 19, wherein the target is selected from the group consisting of titanium, aluminum, aluminum nitride, titanium nitride, carbon, titanium carbide and a combination thereof.

17. (Currently Amended) The system of claim ~~15~~ 19, wherein the laser beam is a pulsed laser beam.

18. (Currently Amended) The system of claim ~~15~~ 19, wherein the confinement magnetic device is a magnet having a ring shape with each end being open and an opening extending through the magnet along a longitudinal axis thereof.

19. (Currently Amended) A magnetic field pulsed laser deposition (PLD) system for depositing a thin film on a substrate, the system comprising:

a target;

a member for holding the target;

a laser source producing a laser beam that is focused on the target to ablate the target and form a plume having charged species and neutral species;

a confinement magnetic device disposed proximate to the target such that the plume is influenced by a first magnetic field generated by the confinement magnetic device, the first magnetic field causing the plume to become more focused, thereby reducing the divergence thereof, the first magnetic field being substantially parallel to a plume ejection direction of the plume as it travels away from the target; and

a deflection magnetic device arranged relative to the

confinement magnetic device so that the focused plume discharged from the confinement magnetic device is deflected by a second magnetic field generated by the deflection magnetic device, the second magnetic field causing the charged species in the plume to be deflected towards the substrate on which the charged species are deposited to form the thin film, the deflection magnetic device having a bend incorporated therein for deflecting the charged species away from an axis containing the plume ejection direction and onto the substrate

~~The system of claim 15~~, wherein the confinement magnetic device is formed of a first permanent magnet and a second permanent magnet, each of the first and second permanent magnets having a north (N) pole and a south (S) pole, the first and second permanent magnets being arranged so that the respective north poles oppose one another and the respective south poles oppose one another.

20. (Original) The system of claim 19, wherein the first and second permanent magnets are spaced apart, forming a gap therebetween, the plume being directed into and traveling within the gap from one end of the confinement magnetic device to the other end thereof.

21. (Currently Amended) The system of claim ~~15~~ 19, wherein the deflection magnetic device is formed of a series of spaced magnetic coils, the bend causing the charged species to be deflected onto the substrate which is disposed away from a direct line of sight of the target.

22. (Original) The system of claim 21, wherein the deflection magnetic device is one of a unitary magnet having the series of magnetic coils incorporated therein and a series of separate magnetic coils that are spaced apart from one another.

23. (Currently Amended) The system of claim ~~15~~ 19, wherein the deflection magnetic ~~member~~ device is a tubular shaped magnet having an opening extending therethrough for receiving the plume, the bend being formed at an end proximate to the substrate.

24. (Currently Amended) The system of claim ~~15~~ 19, wherein the bend is a 45° bend.

25. (Canceled)

26. (Canceled)

27. (Currently Amended) The system of claim ~~15~~ 19, further including:

a positively charged first deflector plate disposed along a first portion of the deflection magnetic device; and

a negatively charged second deflector plate disposed along a second portion of the deflection magnetic device, wherein an electric field is generated in the deflection magnetic device in a direction from the first deflector plate toward the second deflector plate such that negatively charged species of the plume are repelled away from the ~~first~~ second portion and toward the ~~second~~ first portion so as to assist the charged species in being deflected onto the substrate.

28. (Original) The system of claim 27, wherein the negatively charged species comprises electrons.

29. (Original) The system of claim 27, wherein the first portion is an outer curvature section of the deflection magnetic device substantially in direct line of sight with the target and the second portion is an inner curvature section of the deflection magnetic device substantially away from the direct line of sight of the target.

30. (Currently Amended) The system of claim 27, wherein the first and second deflector plates are insulated from the deflection magnetic device by disposing a substrate between each of the first and second deflector plates and the ~~substrate~~ the deflection magnetic device.

31. (Original) The system of claim 30, wherein a bias voltage is applied to the first and second deflector plates, the bias voltage being modulated in value over a period of time so as to effectively vary a thickness of the thin film over a select region of the substrate.

32. (Currently Amended) The system of claim ~~15~~ 19, wherein the target is rotated to periodically expose a surface of the target to the laser beam to ablate ths surface of the target to create the plume.

Claims 33-39 (Canceled)

40. (Currently Amended) ~~A magnetic field pulsed laser deposition (PLD) system for depositing a thin film on a substrate, the system comprising:~~

~~a rotatable holder holding a target;~~

~~a confinement magnet formed of a first permanent magnet and a second permanent magnet, each of the first and second permanent magnets having a north (N) pole and a south (S) pole, the first and second permanent magnets being arranged so that the respective north poles oppose one another and the respective south poles oppose one another, the holder and target being disposed proximate to a first end of the confinement magnet;~~

~~a deflection magnet having a longitudinal bore extending therethrough from a first end to an opposing second end, the bore being of sufficient dimensions to accommodate the platform and target therein, the deflection magnet having a first bend in a first direction along its longitudinal length and a second bend in a second direction along the~~

~~longitudinal length, the first direction being opposite to the second direction, the deflection magnet generating a first magnetic field along its longitudinal length, wherein a second end of the confinement magnet is disposed proximate to the first end of the deflection magnet and the substrate is disposed proximate to the second end of the deflection magnet such that the substrate is axially aligned with the longitudinal bore;~~

~~a laser source producing a laser beam that is focused on the target to ablate the target and produce a plume having charged species and neutral species, the plume being influenced by a second magnetic field generated by the confinement magnet, the second magnetic field causing the plume to become more focused, thereby reducing the divergence thereof before the focused plume enters the longitudinal bore of the deflection magnet where the first magnetic field causes the charged species in the plume to be deflected towards the substrate on which the charged species are deposited to form the thin film; and~~

The system of claim 19, further including: means for electrostatically deflecting the charged species within the longitudinal bore of the deflection magnet.